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THE JOINT CHIEFS OF STAFF
WASHINGTON, D. C. 20301

JCSM-645-67

21 November 1967

MEMORANDUM FOR THE SECRETARY OF DEFENSE

Subject: Aerial Mining Capability (U)

1. Following a briefing on the Air Force study, subject: "Aerial Mining Study," on 23 October 1967, you posed two questions:
 - a. Whether or not the United States should develop an aerial mining capability and, if so,
 - b. What size aerial mining capability should the United States have?

In order to respond to those questions, the Joint Chiefs of Staff have reviewed the Air Force study, other recent mine warfare studies, and current mining plans.

2. The United States currently possesses a considerable capability for aerial mining and contingency plans exist for the employment of aerial mining by the commanders of unified commands. The following is a brief summary of the US aerial mining capability

- a. General. Aerial mining is a primary responsibility of the Navy, with the Air Force having collateral responsibilities as set forth in JCS Publication 2, subject: "Unified Action Armed Forces (UNAAF)."

- b. Navy. In connection with its primary responsibility for the function of conducting mine warfare, the Navy develops, trains, and equips the naval air forces and provides the weapons required for an aerial mining capability. These forces can be deployed from land or sea bases, using presently pre-positioned mine stocks, to execute the contingency mining plans of the commanders of unified commands. Primary aerial delivery vehicles that are certified for this mission are:

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Declassified by Joint Staff
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<u>Aircraft</u>	<u>Maximum 2000# Internal</u>	<u>Mine Capacity External</u>	<u>Maximum 500# Internal</u>	<u>Mine Capacity External</u>
P-2H	4	0	16	4
P-3	1	6	6	10
A-6	0	5	0	5
A-7 ^{1/}	0	6	0	6 ^{2/}

1/ In test and evaluation. Certification scheduled 2/68.

2/ 1000-pound mines vice 500-pound mines.

In addition to the principal aircraft tabulated above, it should be noted that there are other Navy and Marine aircraft which have the capability to lay aerial mines.

c. Air Force. In connection with the collateral function to conduct aerial minelaying operations, the primary Air Force aircraft certified for this mission are:

<u>Aircraft</u>	<u>Maximum 2000# Internal</u>	<u>Mine Capacity External</u>	<u>Maximum 500# Internal</u>	<u>Mine Capacity External</u>
B-52D	4	0	56	0
B-52 G/H	4	0	27	0
A-7 ^{1/}	0	6	0	6 ^{2/}

1/ Certification scheduled for late 1968.

2/ 1000-pound mines vice 500-pound mines.

Although the B-52 is the principal delivery vehicle, there are other Air Force aircraft which have the capability to lay aerial mines.

3. ~~3.~~ Delivery vehicles are not maintained solely for mine-laying operations. Appropriate operational commanders must make forces available from their primary mission for minelaying missions when it is decided to conduct mining operations. The decision as to the most appropriate minelaying vehicle must be made for each target area and will depend on the existing strategic and tactical situations and on the available minelaying vehicles.

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4. ~~(S)~~ The desired size of the required US aerial mining capability is under active review. Size is measured in qualitative and quantitative terms and both characteristics must be considered in relation to the total levels of minelaying-capable forces. The Chief of Naval Operations Mine Warfare Study, Project A-4, dated 24 January 1966, addressed these requirements. This study contained an analysis of the complete US mining capability and concluded that delivery forces for aerial minelaying were adequate to implement the mining plans of the commanders of the unified commands. The US Navy has in progress two comprehensive study efforts: "War at Sea NOW," and an antisubmarine warfare force level study. As a part of these efforts, US aerial mining requirements, including collateral support from the Air Force, will be reexamined. The Air Force study will be most valuable when considered in conjunction with the Navy studies.

5. ~~(S)~~ The Air Force study provides valuable insight into possible qualitative improvements to the Air Force aerial mining capability. This study and other analyses indicate that load carrying capability and survivability during aerial mining operations are the main factors influencing selection of delivery vehicles. Aircraft may suffer high attrition when conducting aerial mining in medium or heavily defended target areas; however, losses can be reduced by increasing the load carrying capacity of the aircraft in order to lower the total number of sorties required. The Air Force aerial mining study indicates the mine carrying capability of the B-52 aircraft can be increased from 4 to 16-22 2,000-pound mines for an approximate total expenditure of \$5.3 million. The changes would include modification of 152 B-52D aircraft at a cost of \$2.3 million for external carriage and the procurement of 300 universal racks to increase the internal capacity at a cost of \$3.0 million.

6. ~~(S)~~ The Joint Chiefs of Staff believe that the United States must be prepared to perform aerial mining in defended and undefended areas and that, to this end, continuing efforts should be made to improve the effectiveness of the US capability for aerial mining. Aircraft penetrating heavily defended target areas in the 1970s will need advanced electronic countermeasures equipment and decoys in order to improve the probability of survival. Additionally, a reduction in aircraft attrition is possible through the use of improved mines now in development which are designed to reduce the number required in a given minefield.

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7. (S) In summary, the Joint Chiefs of Staff:

a. Have reviewed the US Air Force aerial mining study and recommend its consideration in conjunction with the US Navy study effort to determine US aerial mining requirements.

b. Believe that recommendations as to the size of the aerial minelaying capability should await completion and review of Navy studies bearing on the subject. Upon review of the study results in mid-1968, additional recommendations will be forwarded.

For the Joint Chiefs of Staff:



J. O. COBB
Rear Admiral, USN
Deputy Director, Joint Staff

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COPY NO. 7

24 November 1967

NOTE BY THE SECRETARIES

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HOLDERS OF JCSM-645-67

FIRST CORRIGENDUM

Holders of JCSM-645-67, dated 21 November 1967, subject: "Aerial Mining Capability (U)," are requested to substitute the attached revised page 3, and to destroy the superseded page in accordance with security regulations.

L. R. VASEY

R. J. HALLENBECK

Joint Secretariat

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